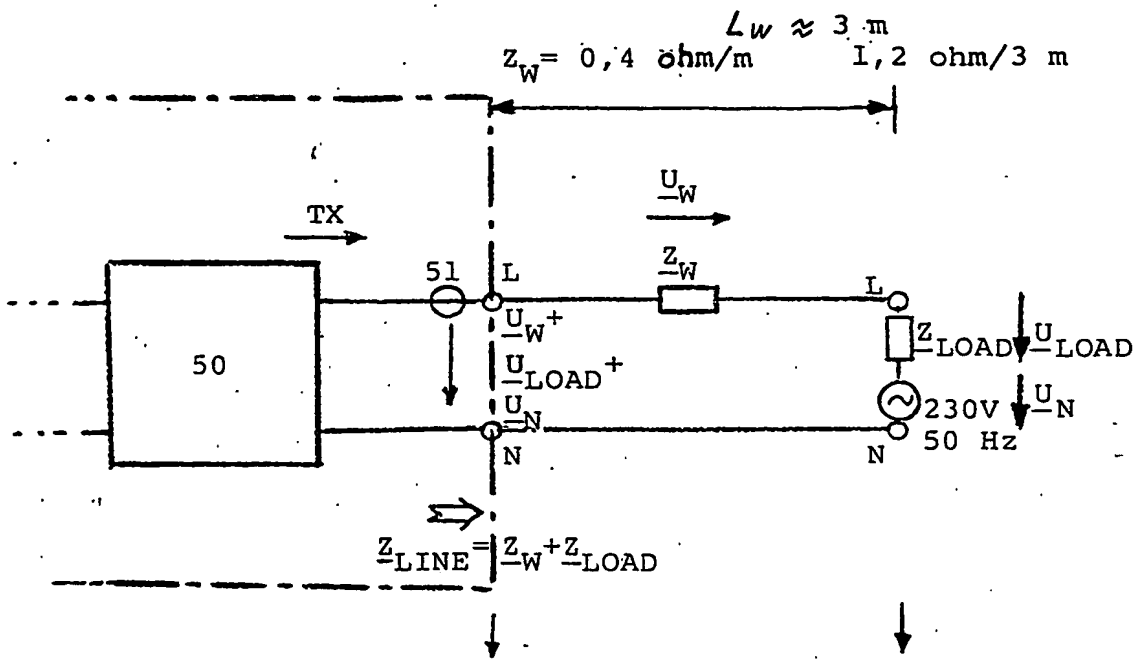

Lw ≈ 3 m
Z_W= 0,4 ohm/m
1,2 ohm/3 m
TX
$\underline{U}_W$
$\underline{Z}_W$
51
L
L
50
$\underline{U}_W^+$
$\underline{U}_{LOAD}^+$
$\underline{U}_N$
N
N
$\underline{Z}_{LOAD}$
$\underline{U}_{LOAD}$
230V
50 Hz
$\underline{U}_N$
$\underline{Z}_{LINE} = \underline{Z}_W + \underline{Z}_{LOAD}$

Fig. 1

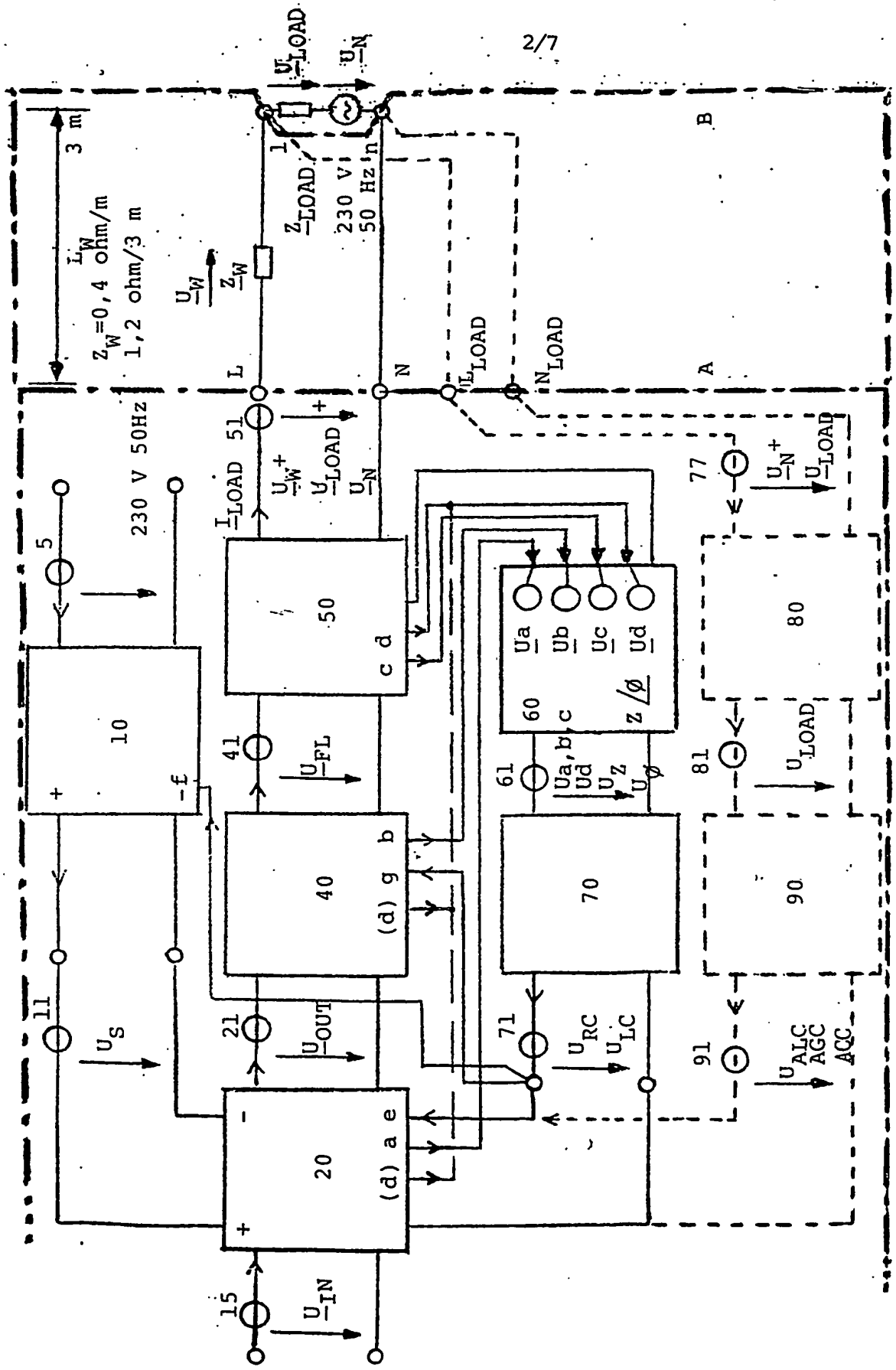

3 m
L_W
Z_W=0,4 ohm/m
1,2 ohm/3 m
230 V 50Hz
U_{LOAD}
U_N
Z_{LOAD}
230 V
50 Hz
U_W
Z_W
L
N
U_{LOAD}
N_{LOAD}
A
B
I_{LOAD}
51
U_W+
U_{LOAD}
U_N
77
U_N+
U_{LOAD}
5
10
+
-£
50
c d
41
U_{FL}
60
Ua
Ub
Uc
Ud
z /ø
c
Ua, b
Ud
U_z
$U_ø$
61
80
81
U_{LOAD}
40
(d) g
b
70
90
11
U_S
21
U_{OUT}
71
U_{RC}
U_{LC}
91
U_{ALC}
AGC
ACC
20
(d) a e
15
U_{IN}

Fig. 2

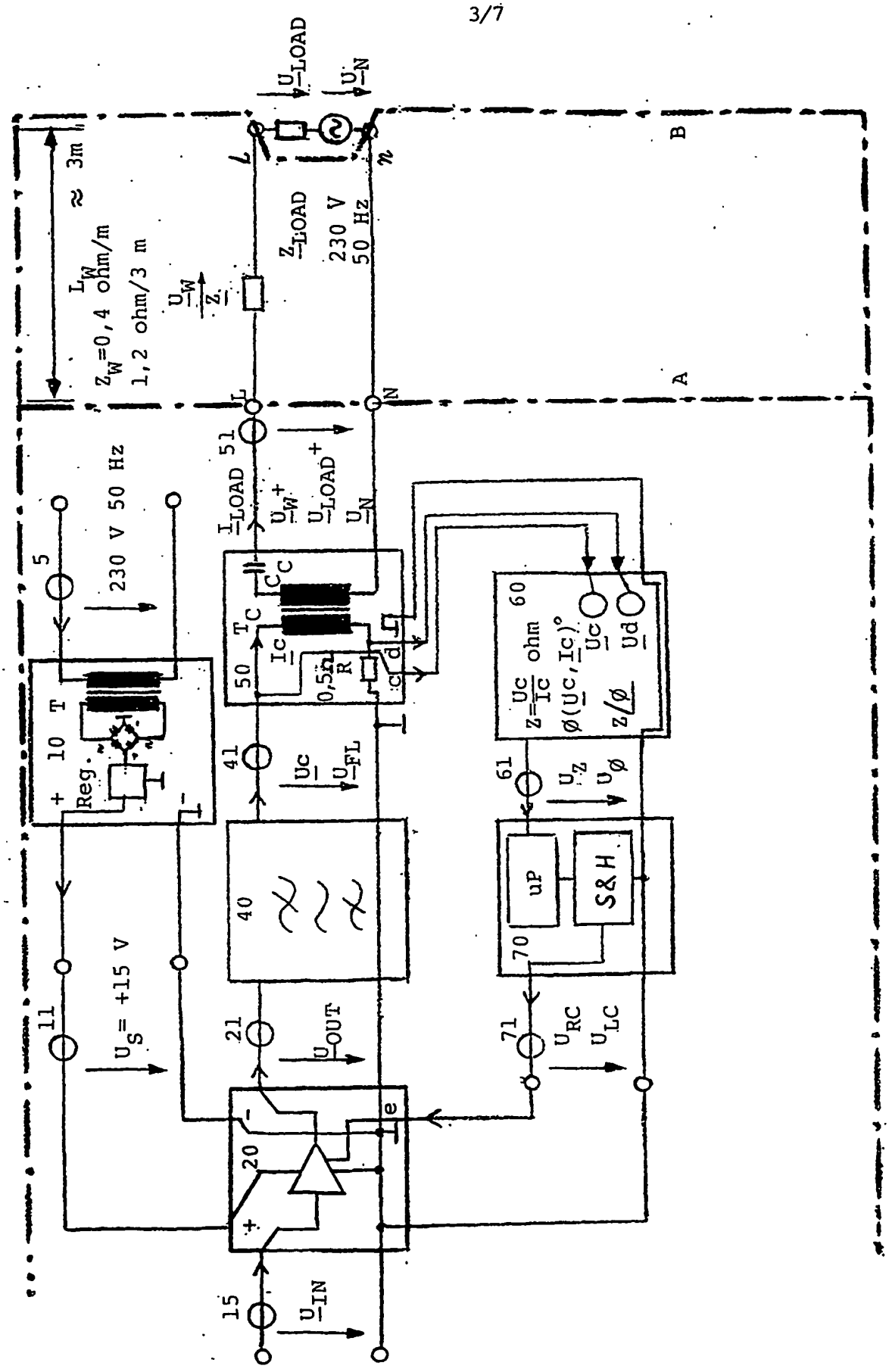

U_LOAD
U_N
≈ 3m
L_W
Z_W=0,4 ohm/m
1,2 ohm/3 m
U_W
Z_W
Z_LOAD
230 V
50 Hz
B
A
L
N
I_LOAD 51
U_W+
U_LOAD+
U_N
5
230 V 50 Hz
C_C
T_C
I_C
0,5Ω
R
d
50
10 T
Reg.
+
-
41
U_C
U_FL
60
Z=U_C/I_C ohm
ø(U_C, I_C)°
U_C
U_d
z/ø
61
U_Z
U_ø
uP
S&H
70
40
11
U_S= +15 V
21
U_OUT
71
U_RC
U_LC
e
20
15
U_IN

Fig. 3

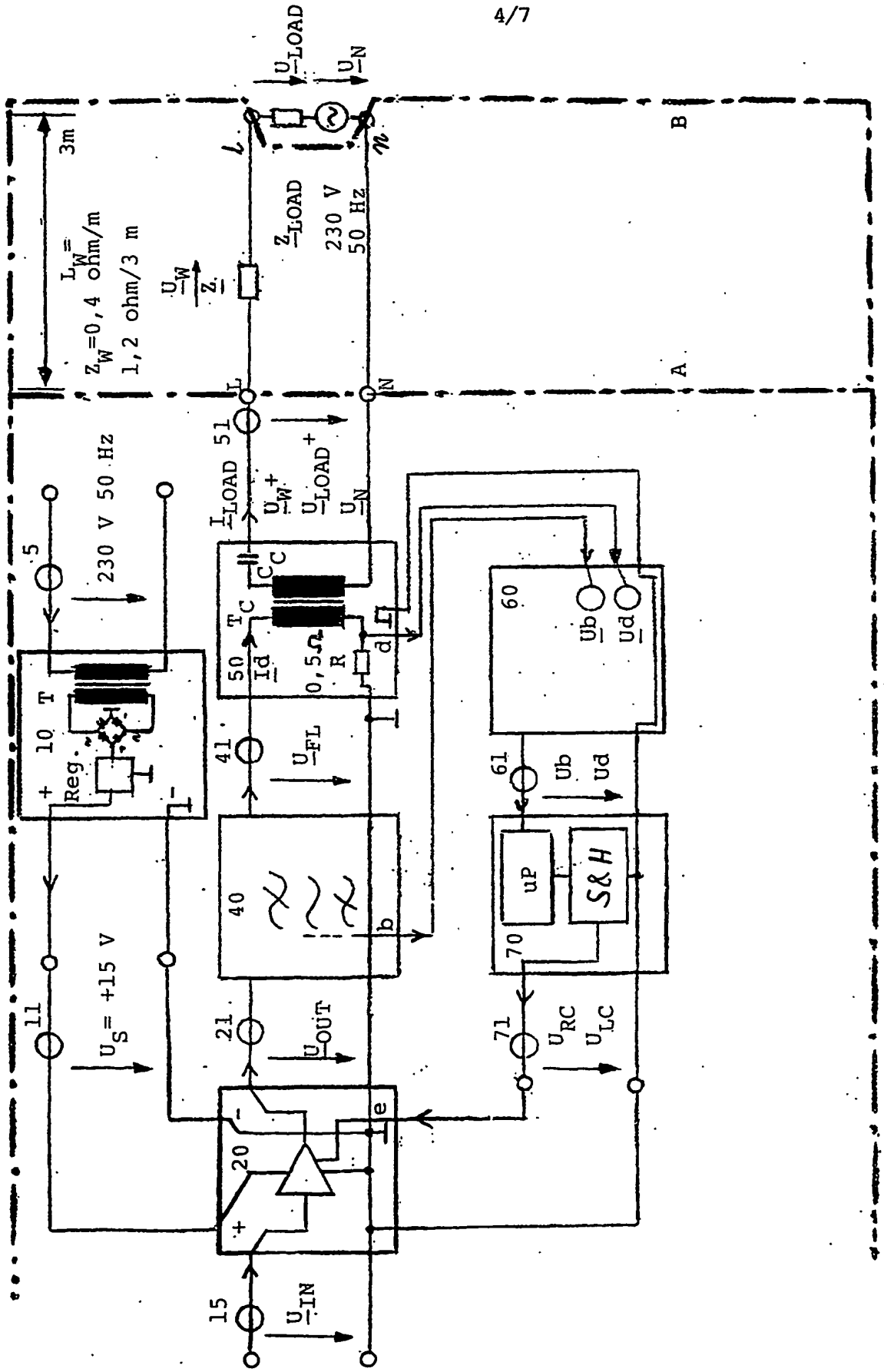

U_LOAD
U_N
3m
L_W= 0,4 ohm/m
Z_W=0,4 ohm/m
1,2 ohm/3 m
U_W
Z_W
Z_LOAD
230 V
50 Hz
L
N
A
B
I_LOAD
51
U_W+
U_LOAD+
U_N
230 V 50 Hz
5
10 T
Reg.
+
-
50
Id
Tc
Cc
0,5Ω
R
d
41
U_FL
60
Ub
Ud
61
Ub
ud
uP
S&H
70
40
b
11
U_S= +15 V
21
U_OUT
71
U_RC
U_LC
20
e
15
U_IN

Fig. 4

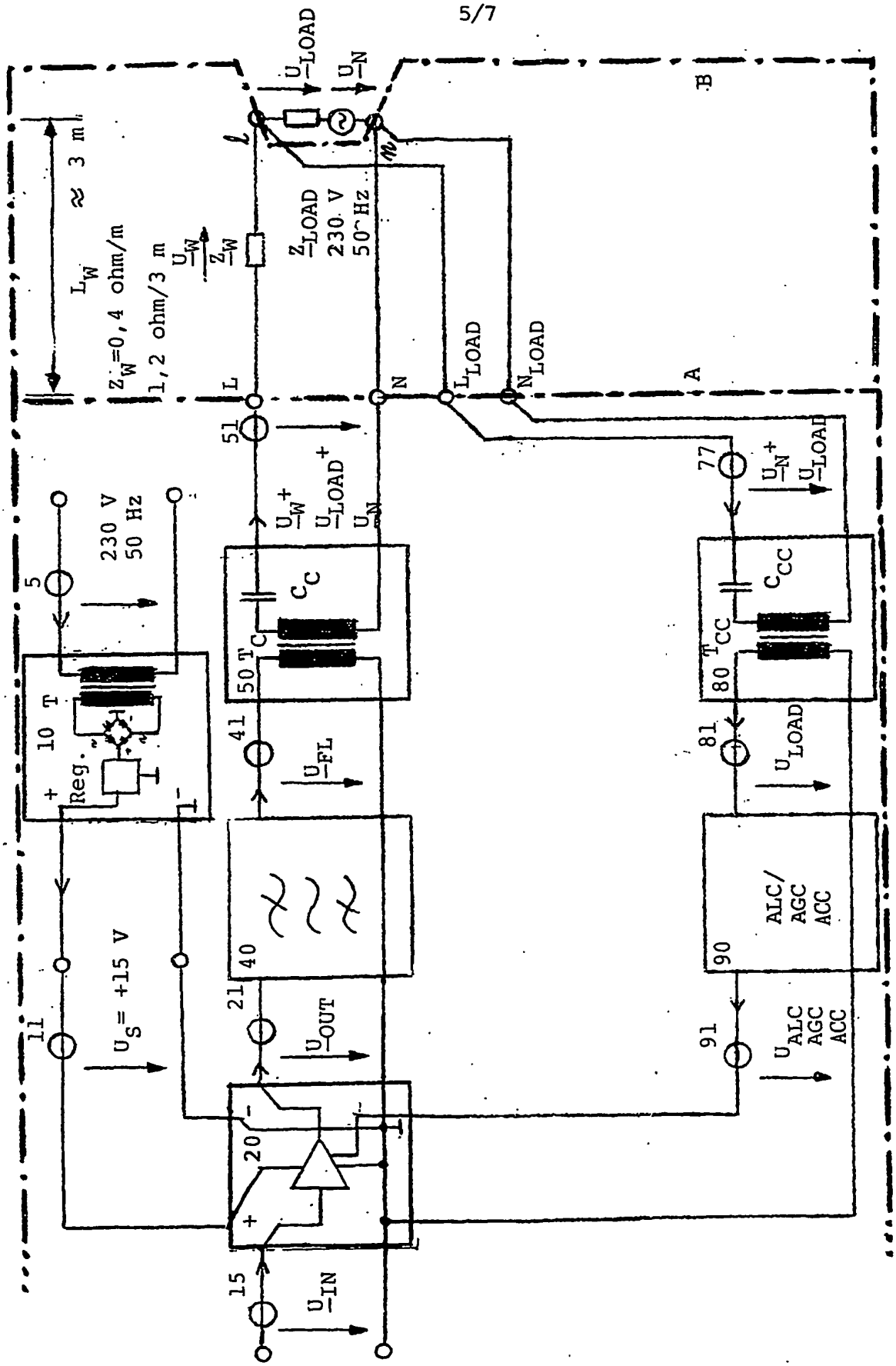
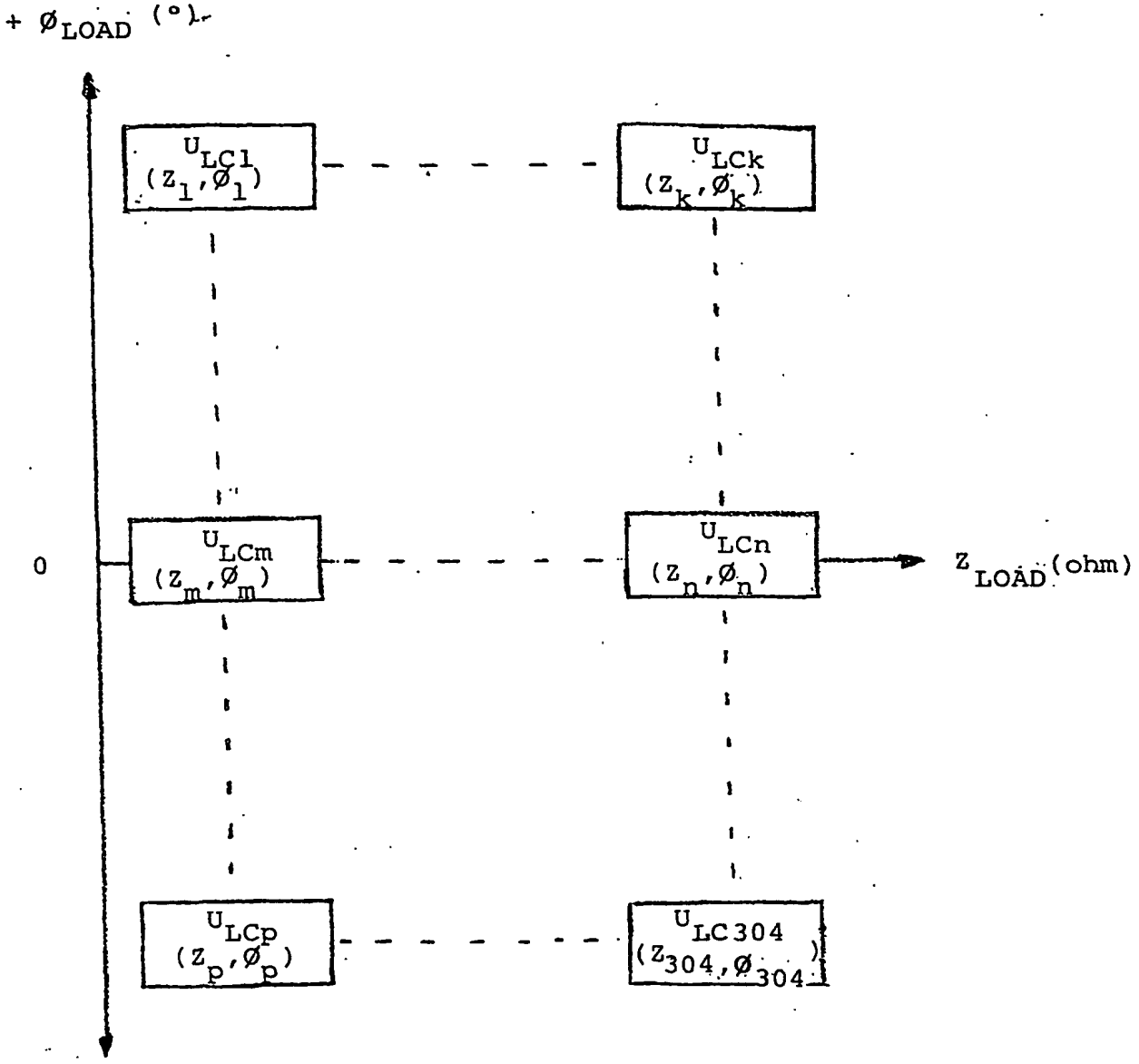

U_LOAD
U_N
B
l
m
≈ 3 m
L_W
Z_W=0,4 ohm/m
1,2 ohm/3 m
U_W
Z_W
Z_LOAD
230 V
50 Hz
L
N
L_LOAD
N_LOAD
A
51
77
U_N+
U_LOAD
U_W+
U_LOAD+
U_N
5
230 V
50 Hz
C_C
C_CC
50 T_C
80 T_CC
10 T
Reg.
41
U_FL
81
U_LOAD
40
ALC/
AGC
ACC
90
21
U_OUT
91
U_ALC
AGC
ACC
11
U_S= +15 V
20
15
U_IN

Fig. 5



$\underline{Z}_{LOAD} = Z_{LOAD} \angle \Phi_{LOAD}$

$Z_{LOAD} = 1 \ldots 50$ ohm

$\Phi_{LOAD} = 0 \ldots \pm 90°$

$\underline{Z} = Z \angle \Phi$

$(Z_1, \Phi_1) \ldots (Z_{304}, \Phi_{304})$

Fig. 6

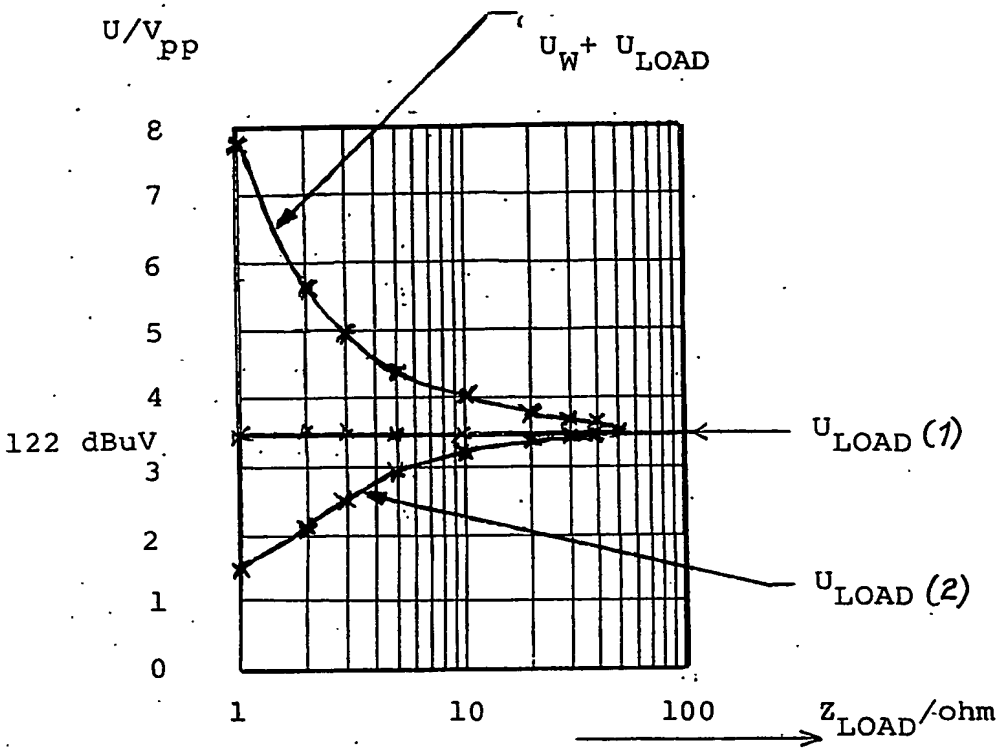

U/Vpp
UW+ ULOAD
8
7
6
5
4
122 dBuV
3
2
1
0
ULOAD (1)
ULOAD (2)
1
10
100
ZLOAD/ohm

Fig. 7